



Project WILD/ Project WILD Aquatic

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Going WILD...!


A Newsletter for Project WILD Educators in California
Volume VII Summer 2002

What's New?

 A new staff member has joined our team! Angela Barlow has worked with the Department of Fish and Game's education programs for the last three years, and joins Project WILD to assist with providing workshop materials and organizing data. Our thanks goes out to Deborah Alanis who admirably supported Project WILD for many years. She is now tackling new challenges for DFG's Enforcement Branch.

 Angela has also brought with her the technical skills to give Project WILD an information-age facelift. In addition to revamping WILD's databases, our web site has a whole new look. Check it out at www.dfg.ca.gov/coned/projectwild/index.html and find Project WILD correlations to California content standards, the workshop schedule, and other EE resources.

 Look for Fall issues of *Going WILD...!* via U.S. mail or on the web site. The Spring issues will be published only to the web.

 Beginning with the March/April 2002 issue, Project WILD now has a feature article in *Outdoor California* Magazine, published by the Department of Fish and Game. The WILD article showcases activities and includes a "Kids Activity Page". *Outdoor California* articles focus on people, wildlife, habitat, and conservation and resource management efforts throughout the state. Check www.dfg.ca.gov/coned/ocal/outdoorcal.html for subscription information.

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To Attract Wildlife...

Imitate Nature



Want to entice wildlife, turn your yard, local schoolyard or a community area into a nature preserve and discover the joy of peaceful observation? The best way to do this is to imitate nature. You'll encourage wildlife to stop in by providing food, water, and cover. Include a safe place to raise young and you'll encourage wildlife to stay longer, perhaps all year.

Before you begin, become familiar with birds, butterflies, bees, bats, squirrels, raccoons, toads, mice, rabbits, insects and any other wildlife residing in your area. Learn which species migrate through your region and would benefit from "temporary accommodations" in your yard. (*What's Wild*-PW, p 7; *Wildlife Is Everywhere*-PW, p 49; *Urban Nature Search*-PW, p 70. For habitat improvement projects use... *Can Do*-PW, p 453, and *Improving Wildlife Habitat in the Community*-PW, p 447.)

When creating an inviting wildlife habitat here are some important considerations:

Food

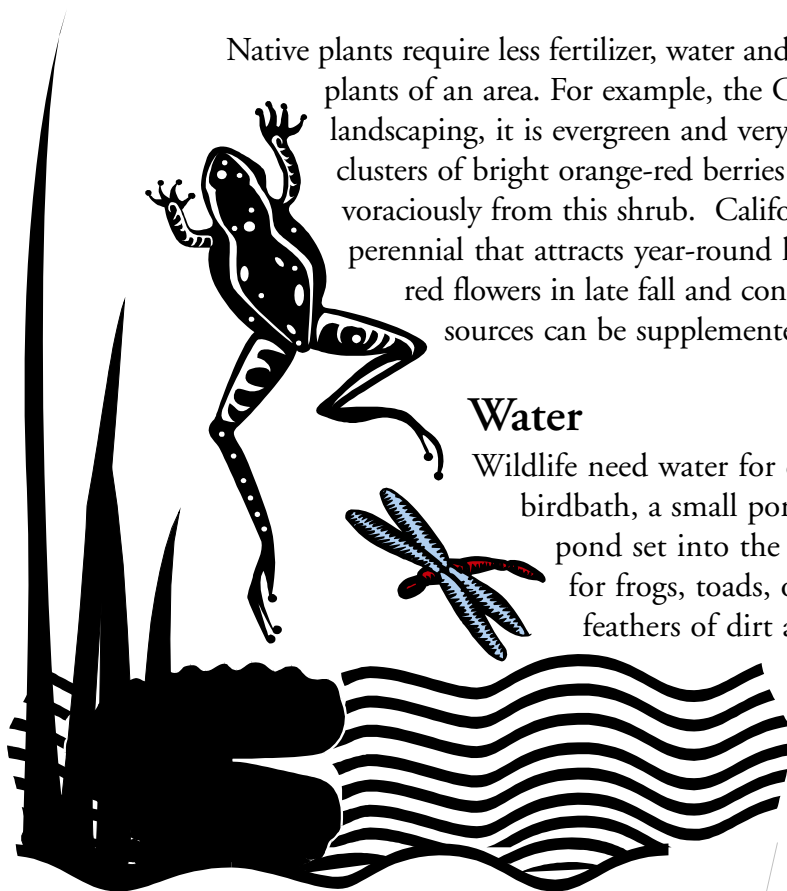
Combine plants that appeal to the widest range of wildlife species. Songbirds flock to fruit in any season, while butterflies, bees and hummingbirds are drawn to flowers rich in sweet nectar. (*Environmental Barometer*-PW, p 80; *Learning to Look, Looking to See*-PW, p 280)

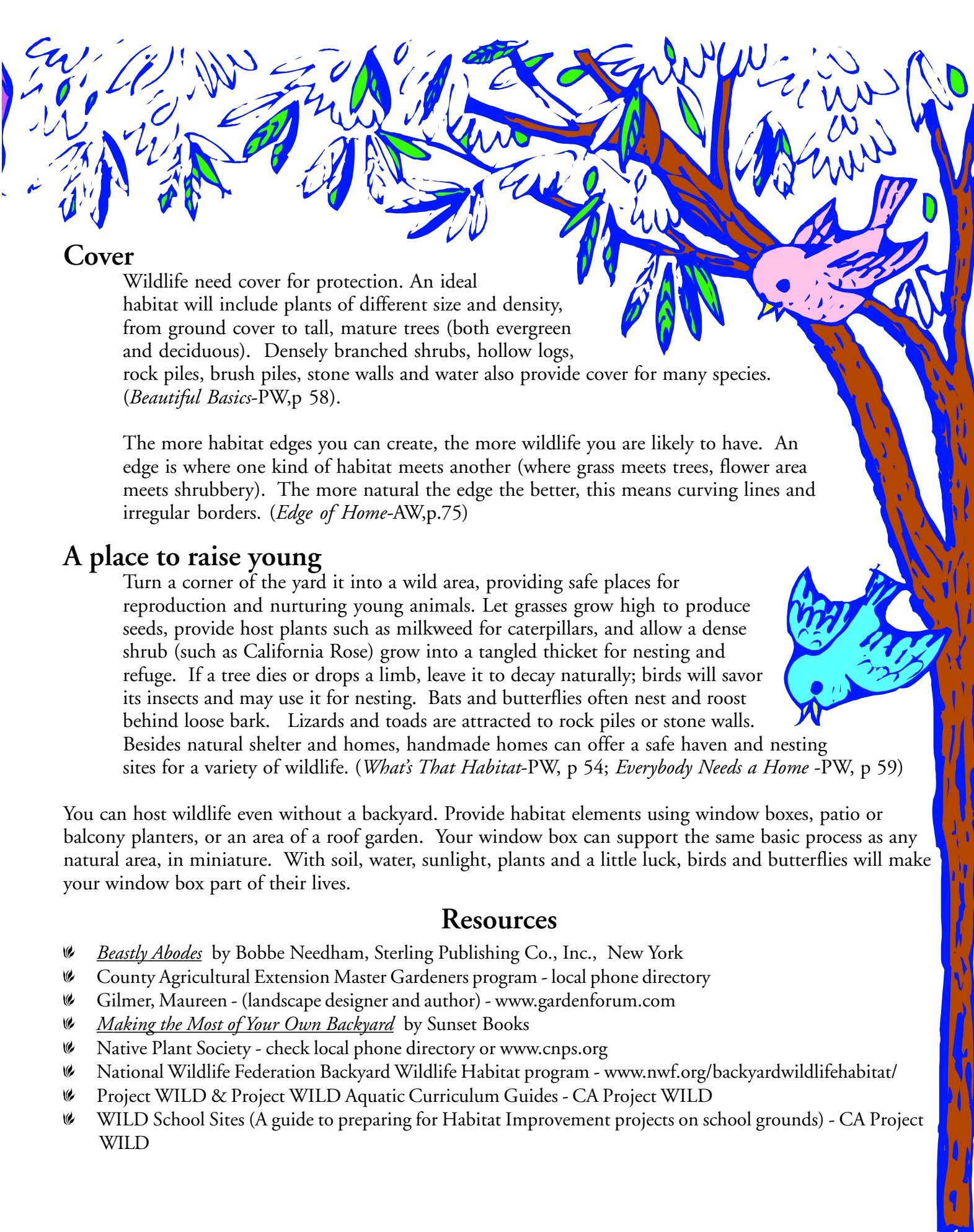
Birds, bats and toads are nature's best pest control mechanism. They are natural insect zappers that consume plant-damaging caterpillars, grasshoppers, mosquitos, moths, stinkbugs, cucumber beetles and other pests. (*Career Critters*-PW, p 371)

Native plants require less fertilizer, water and pest control, plus wildlife thrive best on the native plants of an area. For example, the Christmas berry (*Heteromeles arbutifolia*) is great for landscaping, it is evergreen and very adaptable to garden conditions. It produces huge clusters of bright orange-red berries during the holidays. Robins that over-winter will feed voraciously from this shrub. California fuchsia (*Zauschneria californica*) is a native perennial that attracts year-round hummingbirds. This low spreading plant bears bright red flowers in late fall and continues into winter. During winter months natural food sources can be supplemented by bird feeders. (*World Travelers* P.W. p 334)

Water

Wildlife need water for drinking and bathing, which can be supplied in a birdbath, a small pond, a recirculating waterfall or a shallow dish. A small pond set into the ground can also provide cover and reproduction areas for frogs, toads, other amphibians and insects. Birds bath to free their feathers of dirt and oils and leave space between them for pockets of trapped air. Be sure to keep bird baths clean and replace water regularly. Butterflies can't drink from open water, they need puddles or damp spots of wet sand or dirt. (*Blue Ribbon Niche*-AW,p 52)





Cover

Wildlife need cover for protection. An ideal habitat will include plants of different size and density, from ground cover to tall, mature trees (both evergreen and deciduous). Densely branched shrubs, hollow logs, rock piles, brush piles, stone walls and water also provide cover for many species. (*Beautiful Basics*-PW,p 58).

The more habitat edges you can create, the more wildlife you are likely to have. An edge is where one kind of habitat meets another (where grass meets trees, flower area meets shrubbery). The more natural the edge the better, this means curving lines and irregular borders. (*Edge of Home*-AW,p.75)

A place to raise young

Turn a corner of the yard it into a wild area, providing safe places for reproduction and nurturing young animals. Let grasses grow high to produce seeds, provide host plants such as milkweed for caterpillars, and allow a dense shrub (such as California Rose) grow into a tangled thicket for nesting and refuge. If a tree dies or drops a limb, leave it to decay naturally; birds will savor its insects and may use it for nesting. Bats and butterflies often nest and roost behind loose bark. Lizards and toads are attracted to rock piles or stone walls. Besides natural shelter and homes, handmade homes can offer a safe haven and nesting sites for a variety of wildlife. (*What's That Habitat*-PW, p 54; *Everybody Needs a Home* -PW, p 59)

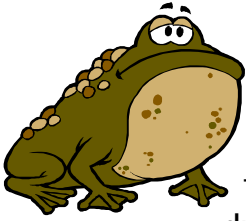
You can host wildlife even without a backyard. Provide habitat elements using window boxes, patio or balcony planters, or an area of a roof garden. Your window box can support the same basic process as any natural area, in miniature. With soil, water, sunlight, plants and a little luck, birds and butterflies will make your window box part of their lives.

Resources

- ☛ *Beastly Abodes* by Bobbe Needham, Sterling Publishing Co., Inc., New York
- ☛ County Agricultural Extension Master Gardeners program - local phone directory
- ☛ Gilmer, Maureen - (landscape designer and author) - www.gardenforum.com
- ☛ *Making the Most of Your Own Backyard* by Sunset Books
- ☛ Native Plant Society - check local phone directory or www.cnps.org
- ☛ National Wildlife Federation Backyard Wildlife Habitat program - www.nwf.org/backyardwildlifehabitat/
- ☛ Project WILD & Project WILD Aquatic Curriculum Guides - CA Project WILD
- ☛ WILD School Sites (A guide to preparing for Habitat Improvement projects on school grounds) - CA Project WILD

For Kids

Toads are an interesting beneficial creature, they eat insects and garden pests, and in China they see "TOAD" in the moon, not "MAN" in the moon. They say eclipses happen when the toad tries to swallow the moon.



Toads are brown in color and have dry, bumpy skin. They have short legs that are good for hopping, but they mostly walk. Toads live almost anywhere that is shady and has dirt. They live in backyards and gardens. They feed on ants, worms, beetles, spiders, snails, and woodlice. In one summer, a toad can eat about 10,000 insects.

No, you can not get warts from a toad. The bumps toads have look like warts but they are not warts. However, the large bumps behind their neck on their back contain a poison. It tastes bad and will irritate the mouth of any predator who tries to eat the toad. Therefore, be careful when handling toads and always wash your hands!

Invite a toad to live in your yard by creating a Toad House. If you have a shady area with some bushes, plenty of insects, some cool, damp dirt to hide in, you have the perfect place for a toad.

Materials for the Toad House:

Medium-sized clay flowerpot, acrylic paints, paint brush, and a trowel or large spoon.

Directions:

1. Decorate the flower pot with paint. Clean the brush between colors. To make light colors mix white with the color. Let the colors dry.
2. Paint designs or flowers or whatever you think a toad would like on top of the color areas.
3. Find a good, shady hiding place outside. Under a bush is a good spot. Bury the pot on its side halfway in dirt.
4. Make sure the dirt inside the pot is a little wet and crumbly. Put a few dead leaves and twigs inside too. You'll know when a toad moves in by the way the dirt at the front of the house gets worn down—that's where the toad sits and waits for its dinner to pass by.



Resources

From the Project WILD Office:
Dept. of Fish & Game/Project WILD,
1416 Ninth St, Sacramento, CA 95814
toll-free (888) 945-3334

Booklet - free upon request

Understanding Invasive Aquatic Weeds -

Information Booklet with classroom activities aimed at grades 5 through 8 works great with aquatic activity *Aquatic Roots*. Excellent booklet focusing on invasive weeds like Hydrilla and water hyacinth.

Aquatic Study Prints Sets

18 (8.5x11) color photos of California native freshwater aquatic species with species-specific information and Project WILD aquatic activities. We would appreciate your donation of \$3.50 each to help offset our cost. Make checks payable to the CA Wildlife Foundation.

Posters - free upon request

Benthic Macroinvertebrates, Indicators of Water Quality (22x16) illustration of stream ecosystem and evidence to determine stream health.

Compliments the PW Aquatic activity *Water Canaries* (pg.38).

What flows here...Ends up Here (16x13)

emphasises the importance of Storm Drain water management and compliments PW activity *Where Does the Water Run After School*.

Vernal Pools changing environments (38x26)

color photos of vernal pool plants, animals and seasonal changes.

Wetlands of the Great Central Valley (46x36)
from 1850s to 1990s maps and photos illustrate the changes.

Available for loan

Elk Truck - (from the Rocky Mountain Elk Foundation) helps students learn about elk and elk habitat. The trunk contains an educator's guide, video, and a variety of specimens to promote understanding.

WILD School Sites - a Project WILD video and guide for habitat improvement projects on school grounds.



An Addition to Project WILD

Science and Civics: Sustaining Wildlife

This high school curriculum involves students (grades 9-12) in environmental action projects which benefit the local wildlife community. It integrates both science and social studies with a two-strand core of activities: Habitat Exploration and Participatory Democracy. The program uses a set of awareness activities in which students investigate their own community's needs related to wildlife and the environment. Students address these needs through service learning or community based projects.

California recently received funds to help implement this high school curriculum. Teacher workshops will be held in August and September. If you are interested in participating in one of the Science and Civic workshops please contact the WILD office at 1/888/945-3334.

California Plan for Environmental Education

The California Regional Environmental Education Community (CREEC) Network is hosting roll-out events through out the state to showcase the California Plan for Environmental Education.

The plan is a set of strategic initiatives for enhancing environmental education in California. It is the result of 12 regional listening sessions attended by over 700 people.

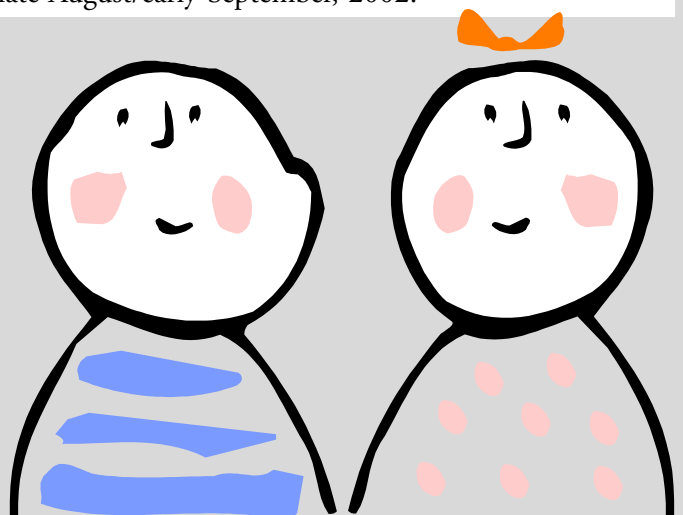
The project is supported by the California Department of Education, California EPA, The Resources Agency, community organizations, and representatives of education, business and industry. If you wish more information about the EE Plan log onto www.californiaee.org.

Project WILD Aquatic *Early Childhood Education Supplement*

WILD Aquatic has received a grant from the California Coastal Commission's Whale Tail Grants Program to develop an Early Childhood Education Supplement. The goal of this project is to adapt 12 Project WILD Aquatic activities to an age-appropriate level, using teaching tools based on cognitive development of young children aged 4-8. The adapted activities will use teaching strategies which are literature-based, hands-on, multi-curricular and theme-based.

The activities will foster an awareness in young children, whether or not they live near the California coast, that they can have an impact upon the coastal environment. The activities explore marine wildlife and habitat and the interconnection of all aquatic ecosystems. For example, pollution that begins at inland suburban storm drains is a threat to both inland watersheds as well as coastal and marine life. Young children throughout California will learn that they have an impact on the natural environment and their impact can be positive or negative. Once young children explore and recognize their connections with the natural world they will understand that impact. This understanding can lead to behavior and attitudes that help keep inland watersheds as well as coastal and marine life healthy.

If you are an Early Childhood educator and would like to participate in piloting the draft program activities, please contact the Project WILD Office at (888) 945-3334. A piloting workshop is planned for late August/early September, 2002.





Web Sites

to connect you to the world of environmental education information

Art & Ecology: Interdisciplinary Approaches to Curriculum
www.getty.edu/artsednet/resources/ecology

Assn. for Environmental and Outdoor Educators
www.aeoe.org

Bureau of Land Management's education page
www.blm.gov/education

CA Air Resources Board (click on city graphic) Visit SMOG CITY, an interactive air pollution simulator.
www.sparetheair.com

CA Dept. of Education, Environmental Education Office
www.cde.ca.gov/cilbranch/oeo

CA Project WILD -- Species and habitat information, and educational resources
www.dfg.ca.gov/coned/projectwild

CEEIN (CA Environmental Education Interagency Network)
www.ceres.ca.gov/education/ceein

CERES (CA Environmental Resources Evaluation System)
www.ceres.ca.gov/education

CREEC (CA Regional Environmental Education Community)
www.creec.org

Department of Water Resources -- CA Water Page
www.dwr.water.ca.gov

Desert USA Magazine
www.desertusa.com

Edwards Aquifer -- A site about this unique groundwater system including general water resource information
www.edwardsaquifer.net

EE-Link - for K-12 environmental educators
www.eelink.net

National Science Teachers Association
www.nsta.org

National Wildlife Foundation's education page
www.nwf.org/education

Secrets at Sea -- Very interactive site featuring a mystery about the problems of whales and ocean pollution. "Flash" is needed for this site.
www.secretsatsea.org

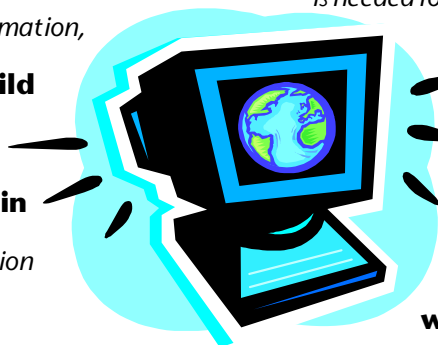
State Water Resources Control Board
www.swrcb.ca.gov

The Water Education Foundation
www.water-ed.org

U.S. Fish and Wildlife Service - Endangered Species Home Page
www.fws.gov

U.S. Geological Survey -- Watershed and other educational materials
www.usgs.gov/education

WaterWiser -- The site contains a host of conservation and water-related links
www.waterwiser.org



Online Safety Rules for Kids

1. Do not give out personal information such as name, address, phone number, or school.
2. Tell an adult if you come accross information that makes you uncomfortable.
3. Never agree to get together with someone you "meet" online.
4. Never send anyone your picture or anything else without checking with an adult.
5. Do not give out your Internet passwords to anyone other than your parents or teachers (not even your best friend).
6. Do not respond to mean or offensive messages. If you get one, tell an adult right away so that they can contact the service provider.
7. Be a good online citizen. Be polite and follow the law.

Thanks to Lisa Voisin who submitted this item from www.safekids.com.

Evaluating Online Sources for Research

As many have discovered, the internet gives us access to a densely vast universe of information. While it is an excellent tool for researching almost any subject, we must be careful to choose reliable sources. Below are some guidelines to help find sources and evaluate them for quality, credibility, and bias. The Project WILD Aquatic activity, Facts and Falsehoods (p. 124) integrates these concepts.

Types of Internet Tools

In addition to basic web page browsers such as Yahoo, Lycos, and Hotbot, meta search engines such as Metacrawler and Webcrawler search multiple search engines at once. Meta search engines will give you an idea of the range of sites available that concern your topic.

General reference sites are available on the web such as *Encyclopedia Smithsonian* (www.si.edu/resource/faq) or *Encyclopedia Britannica* (www.eb.com). You'll also find topic-specific sites such as *Science Online* (www.sciencemag.org).

Specific groups of web sites can be particularly helpful. If the topic is a political issue, government sites (ending in ".gov") offer a reliable source of law texts, statistics and geographical data. News sites usually provide access to recent archives of articles, interviews, and broadcasts. Respected national media sources include The Washington Post, CNN, National Public Radio, Christian Science Monitor, and National Geographic.



For older audiences, superb references can be obtained from peer-reviewed online databases like *Infoseek* that catalog professional journal articles and "white papers." Many of these require a proxy (password) access, but check with your local public library to find out if membership includes online access from your home. Otherwise, they can be accessed from public or university library computers free of charge.

Evaluating Online Sources

- ▽ Is the information current? Look for information about when the site was last updated or when the article was written if your topic is time-sensitive.
- ▽ Is it a primary source? Getting data from a source that conducted the initial research will be more reliable than a third-person report of the research (a secondary source).
- ▽ Is the site credible? Information on personal websites is not reliable. Use sources that have an established presence – ask around for sources that are commonly known for accurate and balanced reporting.
- ▽ What is the source's bias? Sometimes bias is unavoidable, so recognizing it is the key. Seek a balance from various viewpoints. To evaluate for bias, try to determine:
 - w if the author is associated with a special-interest group such as Greenpeace or the National Rifle Association that would only represent one side of an issue;
 - w if the author has any political motivation or religious views that would affect objectivity;
 - w if and how fairly the author addresses opposing viewpoints;
 - w whether the author's arguments are supported by thoroughly researched data or by emotional statements and isolated incidents;
 - w and if any of the author's assumptions are questionable.

Adapted by Angela Barlow from *A Writer's Reference*, 4th Edition by Diana Hacker, published in Boston by Bedford/St. Martin's, ©1999.

UPDATING THE DATABASE!

Keeping our data base current will allow us to keep you current with WILD Information. Mail any address, name, or new telephone area code changes to **Dept. of Fish and Game/Project WILD, 1416 Ninth Street, Room 1326, Sacramento, CA 95814**; or e-mail them to abarlow@dfg.ca.gov.

INTERESTED IN FACILITATOR TRAINING?

Facilitators help other educators learn about Project WILD and agree to conduct one workshop or presentation a year. Would you like to become a Project WILD Facilitator? **Check the Facilitator interest box below and send in the return address portion of the newsletter.** You will receive a Project WILD Facilitator Interest Form to complete and return. The information from this form will help us provide you the training needed to be a Project WILD Facilitator.

RESOURCES FROM CA DEPARTMENT OF FISH AND GAME

- In addition to hunting and fishing information, the **Department of Fish and Game Website** provides information about California's native species, their habitats, and their relationship with us! Check it out at www.dfg.ca.gov.
- *Outdoor California* magazine has great information on wildlife, habitat and resource management. Subscriptions are \$9.95 (1 yr.-6 issues). Send your check to: *Outdoor California*, PO Box 944209, Sacramento, CA 94244-2090.

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